

What is claimed is:

1. Textile fabric of synthetic fibers coated with fluoropolymer, characterized in that the surfaces of the synthetic fibers are fluorinated and in that any fluoropolymer coating immediately adjoining the fabric surface is free of adhesion-promoting constituents.
2. Textile fabric as claimed in claim 1, characterized in that the surfaces of the synthetic fibers are surface fluorinated by gas phase fluorination with gaseous fluorine (F).
3. Textile fabric as claimed in claim 1, characterized in that the fluorine concentration of the fluorination atmosphere is in the range from 0.1 to 10%.
4. Textile fabric as claimed in claim 1, characterized in that the synthetic fibers have a fluorine content in the range from 1.3×10^{-4} to 1.2×10^{-2} mg F/cm², with fluorine (F).
5. Textile fabric as claimed in claim 3, characterized in that the fluorine concentration is in the range from 0.1 to 5% and especially in the range from 0.1% to 2%.
6. Textile fabric as claimed in claim 4, characterized in that the synthetic fibers have a fluorine content in the range from 1.3×10^{-4} mg F/cm² to 4.45×10^{-3} mg F/cm² and especially in the range from 1.3×10^{-4} mg F/cm² to 1.8×10^{-3} mg F/cm².
7. Textile fabric as claimed in claim 5, characterized in that the fluorine concentration is in the range from 0.1 to 1%.
8. Textile fabric as claimed in claim 1, characterized in that the synthetic fibers are furnished with Lowick finish of a hydrophobic composition.
9. Textile fabric as claimed in claim 1, characterized in that the synthetic fibers are free of Lowick finish.

10. Textile fabric as claimed in claim 1, characterized in that the fluoropolymer coating contains from 40 to 60% by weight of tetrafluoroethylene structural units, from 10 to 30% by weight of hexafluoropropylene structural units and from 20 to 40% by weight of vinylidene fluoride polymer structural units.

11. Textile fabric as claimed in claim 10, characterized in that the fluoropolymer coating contains wetting agents, dispersants and/or stabilizers as additives.

12. Textile fabric as claimed in claim 10, characterized in that the fluoropolymer coating contains from 1 to 3% by weight of a thickener, based on the weight of the fluoropolymer coating.

13. Textile fabric as claimed in claim 11, characterized in that there is a sintered fluoropolymer coating on both the front and the back of the fabric.

14. Textile fabric as claimed in claim 1, characterized in that the fluoropolymer coating has an adhesive strength as measured in accordance with DIN 53530 of at least 100 N/5 cm.

15. Textile fabric as claimed in claim 1, characterized in that the adhesive strength as measured in accordance with DIN 53530 of the fluoropolymer coating is in the range from 100 N/5 cm to 450 N/5 cm.

16. Yarn composed of synthetic fibers or filaments coated with fluoropolymer, characterized in that the synthetic fibers or filaments are surface fluorinated and in that any fluoropolymer coating immediately adjoining the synthetic fiber or filament surfaces is free of adhesion-promoting constituents.

17. Yarn as claimed in claim 16, characterized in that the fluoropolymer coating has an adhesive strength such that exposure to mechanical stresses of the kind occurring in the further

processing of yarn from the fibers or filaments leaves the fluoropolymer coating adherent and defect free.

18. Fluoropolymer-bonded sewing yarn, characterized in that the surfaces of the synthetic fibers or filaments of which the sewing yarn is composed are fluoropolymer fluorinated and in that the fluoropolymer coating which provides a direct elastic and flexible bond between the individual fibers or filaments is free of adhesion-promoting constituents.

19. Sewing yarn as claimed in claim 18, characterized in that the bonding fluoropolymer coating has an adhesive strength such that exposure to mechanical stresses as occur in the course of sewing leave the fluoropolymer coating undetached from the synthetic fibers or filaments.

20. A process for producing a textile fabric from synthetic fibers as claimed in claim 1, which comprises a first step of fluorinating the synthetic fibers in a fluorine/carrier gas atmosphere and a second step of coating the fluorinated synthetic fibers with an aqueous fluoropolymer composition on both sides of the fabric.

21. A process as claimed in claim 20, wherein the fabric is sintered for up to two minutes at a temperature from 180 to 210°C.

22. A process as claimed in claim 21, wherein first the front of the fabric is sintered for up to two minutes at a temperature from 180 to 210°C.

23. A process as claimed in claim 22, wherein, after the front, the back of the fabric is sintered for up to two minutes at a temperature from 180 to 210°C.

24. A process as claimed in claim 20, wherein plural layers of aqueous fluoropolymer composition are applied to both sides of the fabric and each sintering operation for an applied layer is followed by an intervening drying for up to two minutes at a temperature from 180 to 210°C.

25. A process as claimed in claim 24, wherein the fabric is fully sintered at a temperature up to 210°C for from six to ten minutes after the last layer has been applied.

26. A process for producing yarn from synthetic fibers or filaments as claimed in claim 16, which comprises a first step of fluorinating the yarn in a fluorine/carrier gas atmosphere and a second step of dipping the fluorinated yarn into an aqueous fluoropolymer composition.

27. A process as claimed in claim 26, wherein the yarn is heated for from one to two minutes in an environment which has a temperature from 180 to 220°C.

28. A process for producing a bonded sewing yarn as claimed in claim 18, which comprises a first step of fluorinating the sewing yarn in a fluorine/carrier gas atmosphere and a second step of the fluorinated sewing yarn being dipped into an aqueous fluoropolymer composition and impregnated to an add-on level of 14 to 21% by weight of dry add-on, based on the sewing yarn weight.

29. A process as claimed in claim 28, wherein the impregnated sewing yarn is heated for from one to two minutes in an environment whose temperature is in the range from 180 to 220°C.

30. The use of the textile fabric of claim 1 for producing flexible containers, compensators, bellows, awnings, tents, air-houses, membranes, conveyor belts, fabric tubes, transportation systems.

31. The use of the yarn of claim 16 for producing textile fabrics, wovens, formed-loop knits, nonwoven scrims, nonwovens, layered products formed from identical or different textile sheet materials.
